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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/305,313	05/05/1999	TAKAHIRO MATSUURA	862.2821	1944

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EXAMINER	
LAROSE, COLIN M	
ART UNIT	**PAPER NUMBER**
2623	15

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/305,313	MATSUURA, TAKAHIRO	
	Examiner	Art Unit	
	Colin M. LaRose	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9 and 11-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Arguments and Amendments

1. Applicants' amendments and/or arguments filed 21 August 2003, have been entered and made of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6, 9, 11-14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,442,717 by Murakami.

Regarding claims 1, 9, and 17, Murakami discloses an image processing method/product/apparatus (figure 3) for performing the steps of:

detecting an image area excluding a frame image contained in an inputted image

(figure 4: the area surrounding the sweater and fruit constitute a frame area (i.e. the "frame image" is the background area or area surrounding the object of interest); the image area (i.e. the objects) is detected by designating object colors (column 7, lines 13-20) and then determining which pixels within the image are sufficiently close to the designated colors (column 8, lines 10-23));

generating correction information of the detected image area, and correcting the image area based on the generated correction information

(column 12, lines 37-60: the detected pixels (i.e. the object pixels) are subject to sharpness correction; correction information is generated for the detected area (equations 1-3, column 13) and the detected area is corrected using said information (i.e. each of the detected pixels in the image is corrected using the right side of the equations),

wherein, in said detecting step, the frame image, which has gradation, is detected by using a detection method of determining whether or not a pixel of interest and pixels adjacent to the pixel of interest have a same hue and a difference between lightness and saturation having a predetermined value or less

(column 12, lines 37-60: the pixels that comprise the "frame image" are detected by comparing the hue, saturation, and value of the designated color(s) ($H_u/S_u/L_u$) to the hue, saturation, and value of the pixels within the image ($H_{ij}/S_{ij}/L_{ij}$); if a current pixel (i.e. the pixel of interest) and adjacent pixels (i.e. pixels near the pixel of interest) are sufficiently different from the designated color, then they are determined to constitute the "frame" area (and sharpness correction is not executed on that area); in other words, to detect the frame area, it is determined whether a pixel of interest and all other pixels in the image have a same hue as the designated color (i.e. the hues are sufficiently close), whether the difference between lightness for the pixels in the image and the designated color are less than dL, and whether the difference between saturation for the pixels in the image and the designated color are less than dS).

Regarding claims 3 and 11, Murakami discloses identifying the image area other than the frame image based on a detection result of the pixel constructing the frame image (i.e. detecting the pixel(s) constructing the frame identifies where the object (non-frame) pixels are located) and

supplying information representing the identified image area to the generator and corrector (column 50-56: a control signal that denotes the identified area is sent to the sharpness processor).

Regarding claims 4 and 12, Murakami discloses detecting comprises scanning the image in the horizontal direction in units of columns (column 12, lines 24-47: the pixels of the image are stored as successive columns and are scanned accordingly) and detecting, as two ends of the image area in the horizontal direction, a first column having a pixel determined not to construct the frame image and a next column having a pixel determined to construct the frame image (e.g. when detecting the frame area of figure 4, Murakami's system detects a column on the leftmost side of the sweater that contains a "sweater" pixel (i.e. a pixel determined not to construct the frame) and a column on the left side of the sweater that has a "non-sweater" pixel (i.e. a pixel determined to construct the frame).

Regarding claims 5 and 13, Murakami discloses detecting comprises scanning the image in the vertical direction in units of rows (column 12, lines 24-47: the pixels of the image are stored as successive rows and are scanned accordingly) and detecting, as two ends of the image area in the vertical direction, a first row having a pixel determined not to construct the frame image and a next row having a pixel determined to construct the frame image (e.g. when detecting the frame area of figure 4, Murakami's system detects a row on the topmost side of the sweater that contains a "sweater" pixel (i.e. a pixel determined not to construct the frame) and a row above the sweater that has a "non-sweater" pixel (i.e. a pixel determined to construct the frame).

Regarding claim 6 and 14, Murakami allows for re-execution of identification processing of an image area other than the frame after correction has ended for situations in which further correction is desired. The detector in Murakami's disclosure is part of an application stored in a computer that is able to re-identify and reprocess image areas an arbitrary number of times.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 7, 8, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami in view of Kawata.

Regarding claim 7, 8, 15 and 16, Murakami teaches performing sharpness processing on the detecting image area.

Murakami is silent to generating, as correction information, highlight and shadow portions and white and black balances, and using said highlight and shadow points and white and black balances to correct the image.

Kuwata discloses generating, as correction information, highlight and shadow portions (column 9, lines 42-52) and white and black balances (figure 18) to be corrected or adjusted, and then correcting the gradation of an image area based on highlight and shadow points (column 26, lines 43-67) and black and white balances (figures 22-23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Murakami by Kuwata to include correcting the image portion according to

highlight/shadow points and black/white balance since Kuwata that performing the claimed corrections improves image quality.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (703) 306-3489. The examiner can normally be reached Monday through Thursday from 8:00 to 5:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (703) 306-0377.

AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

CML
Group Art Unit 2623
12 November 2003